

REMARKS

This application contains claims 15-23 and 37-45. Claims 15-18 and 37-41 are allowed. Claim 21 has been canceled. Claim 19, 22, 42 and 45 are hereby amended. No new matter has been introduced. Reconsideration is respectfully requested.

Claims 19-23 and 42-45 were rejected under 35 U.S.C. 112, second paragraph, for indefiniteness. Applicant has amended these claims in order to clarify elements that were considered by the Examiner to be unclear. Specifically:

- Claim 19 has been amended to recite a radiation source and sample.
- The reference to the "first element" and "last element" has been removed from claims 19 and 42, as these elements are not essential to these claims. Note, however, that the first and last elements of the detector array are defined on page 21, lines 13-17, of the specification, and are shown explicitly in Fig. 2. Reference to the first and last elements of the array remains in claims 22 and 45.
- The term "evacuatable" in claim 19 was meant to convey that the enclosure is capable of being evacuated, not that it is necessarily evacuated at all times. Claim 19 has been amended accordingly.
- Claim 22 has been amended to cast the claim limitation in physical, rather than functional, form.

Claims 19-23 and 42-45 were rejected for obviousness-type double patenting over commonly-owned U.S. Patent 6,512,814. A terminal disclaimer is filed herewith in order to overcome this rejection.

Claims 19-23 and 42-44 were rejected under 35 U.S.C.

103 over Farr (U.S. Patent 5,574,284), while claim 45 was rejected under 35 U.S.C. 103 over Farr in view of Koppel (U.S. Patent 5,619,548). Applicant respectfully traverses these rejections. Claim 19, as amended, recites an assembly for testing a sample, comprising a radiation source, an array of detector elements and an enclosure. The array is positioned at the rear side of the enclosure, which is separated from the front side of the enclosure (where a window is located) by a distance that is at least equal to the length of the array.

Farr describes an energy-resolving X-ray detector, based on a charge-coupled integrated circuit radiation detector device. As shown by Farr in Fig. 7 (and described in col. 11, lines 5-20), the integrated circuit 12' is separated from the sample 44 by a window 60, which encloses a pressurized chamber 62. Fig. 7 shows the actual physical arrangement of the elements of the sensor unit and sample, while Fig. 8 is an exploded view whose purpose is simply to show the notation used for various dimensions of these elements of Farr's system, not to show their actual positions. In Fig. 7, it is very clear that the distance between integrated circuit 12' and window 60 is considerably less than the length of circuit 12'. In fact, at col. 11, lines 8-10, Farr teaches explicitly that the distance between the integrated circuit and the sample should be reduced to the extent possible: "The geometry of the sensor unit [is] arranged for minimizing... a sample to detector distance D_D as indicated in Fig. 8 for achieving a high coupling efficiency..." (emphasis added).

By contrast, claim 19 covers an arrangement in which the distance between the window and the detector - and hence from the sample to the detector - is intentionally increased in order to reduce background radiation at the array (see page 21, lines 21-28, in the specification).

As noted above, Farr teaches away from this limitation. Therefore, claim 19 is believed to be patentable over Farr, as are claims 20, 22 and 23, which depend from claim 19.

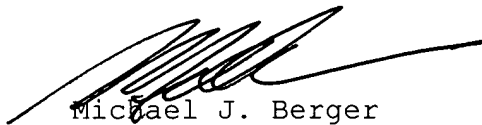
Claim 42 likewise recites a method for detecting radiation in which an array of detector elements is enclosed in an enclosure, such that the distance between the array and the enclosure window is at least equal to the length of the array. Therefore, for the reasons stated above in reference to claim 19, claim 42 is believed to be patentable over Farr, as are claims 43-45, which depend from claim 42.

Applicant believes the amendments and remarks presented hereinabove to be fully responsive to all the grounds of rejection raised by the examiner. In view of these amendments and remarks, applicant respectfully submits that all of the claims in the present application are in order for allowance. Notice to this effect is hereby requested.

Please also acknowledge receipt of the enclosed documents by stamping the enclosed postcard and returning same to us.

Please charge any outstanding amount or credit of any overpayment to Deposit Account No. 01-1785.

Respectfully submitted,
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